In the histories in which blood studies were recorded, the eosinophile counts were within normal limits.

It is quite apparent from the foregoing data that trichinosis is as prevalent in Los Angeles as it is in other cities in which surveys of trichinae infestation in cadavers have been made. This information becomes even more startling when the percentages of infestation are transferred from the dead to the living. The droll implication is that nearly one-half million residents of Los Angeles County eat undercooked, infected pork, and carry worms in their muscles.

SUMMARY

1. Eighteen and two-tenths per cent of 170 diaphragms examined by the digestion method were found infested by Trichina spiralis.

2. The percentage of infestation is much higher in Mexicans and colored people than in the white population.

3. Four of the thirty-one positive diaphragms were found to be heavily infested.

4. A definite clinical history of trichinosis was not found in any of the positive cases.

University Park.

HUNNER'S ULCER AS AN UNSUSPECTED CAUSE OF GASTRO-INTESTINAL SYMPTOMS

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IN 1914 Hunner[1] reported, before the Southern Surgical and Gynecological Association, a series of eight cases having a hitherto undescribed lesion of the urinary bladder. These cases all occurred in women, since his practice was so limited. At the time, however, he predicted that the lesion also occurred in men, and since then this has been reported.

This lesion is characterized by intractable bladder pain, frequency and burning on urination, a low bladder capacity, and paucity of changes in the chemical, microscopic, and bacteriologic study of the urine. The cystoscopic examination, unless carefully done with this lesion in mind, is frequently reported as negative, and half the women in Hunner's group had been subjected to extravesical surgery before the lesion was recognized.

The cystoscopic picture consists of very minute ulcerations through the mucosa, 1 to 5 millimeters in diameter. These are surrounded by radiating, dilated capillaries, and a zone of edema 4 to 5 centimeters in diameter. The ulcerated area bleeds readily if the bladder is overdistended, or is touched by instrument or cotton pledget.

The tissue changes consist of a small zone of epithelial destruction, with regeneration around the margins of the ulcer. The underlying submucosa shows extensive fibroblastic proliferation, an increase in the number of capillaries, and infiltration with inflammatory cells over a zone much wider than the ulceration. The inflammatory cells are chiefly polymorphonuclear, but mononuclear cells are present in abundance.

Urinary examination shows little to account for the cystitis, at most a very few red blood cells; although the patient will have noted, in some instances, some blood in the urine. Cultures of the urine have been consistently negative, and search for tubercle bacilli has been fruitless.

The tissue changes present have given the lesion the aptly descriptive name of submucous fibrosis of the bladder.

While the typical symptomatology leaves no doubt as to the site of the disturbance, there are occasional cases, exemplified by the fourth case of Hunner's series and the one here reported, in which the presenting complaints and symptoms are misleading.

REPORT OF CASE

A 58-year-old white housewife was first seen in September, 1937, complaining of abdominal distention with gas, belching, and flatulence. Accompanying the distention there was severe vaginal pain and urinary frequency. Her symptom-complex started with the abdominal discomfort which came immediately after or during meals, and produced the intolerable pain in the vagina. The symptoms had been present for four years, and she was accustomed to being forced to hurry from the table during this period of time in order to relieve herself of accumulated rectal gas and thus ease her pain. If this was not successful she would resort to enemas or sitz baths. The pain occurred so promptly after the ingestion of any food and most liquids that she was undernourished, very nervous, apprehensive, and afraid to eat.

She gave a story of lifelong constipation, with the habit of regular, frequent use of the enema tube because the use of cathartics and their resultant cramping aggravated the intense vaginal pain. There was no rectal pain and no burning on urination. Her sole urological complaint was frequency, which she stated always came and was made worse with the accumulation of gas in the bowel. Her past history and inventory of systems were not relevant.

The positive findings in the physical examination were: a small, undernourished, pale, apprehensive woman. Weight, 94½ pounds; height, 59 inches. The turbinate bones were large and covered by reddened, thick mucous membrane. The tonsils were large and showed moderate infection. The mouth was edentulous, the last teeth having been removed some three months previously because of infections. The heart was small, rate 92 with a slightly impure, first sound and a faint systolic murmur. The blood pressure was 162/100. The peripheral vessels were slightly sclerotic. There were a few, diffuse, sibilant squeaks throughout the lung fields, which were thought to be atalectatic in origin. The abdominal wall was relaxed, with moderate diastasis of the recti muscles. There was much crepitus and gurgling of gas on manipulation of the abdominal contents. The wall was held semi-rigid, and the ascending and descending portions of the colon could be felt as contracted, firm cords. The rectal sphincter was spastic and the pelvic examination revealed nothing of note. The urine showed a faint trace of albumin, five to seven pus cells and two to five red blood cells per high dryfield. Blood count showed a secondary anemia.

Roentgenological examination of the gastro-intestinal tract showed evidence of colon irritability and a questionable filling defect in the rectosigmoid junction, which has since been shown to fill out.

After three weeks' trial on carefully outlined and faithfully executed colon management, she reported back with no relief of symptoms. At that time she was referred for a study of the urinary tract. The cystoscopic investigation revealed a submucous fibrosis in the vault of the bladder, which was then cauterized. When seen three days later there was still some slight urethral irritation, but practically all of the agony she had suffered for four long years had subsided. In three weeks' time her only symptoms centered about the constipation. In three months' time her weight had increased by ten pounds, and this has been maintained at that level since. There have been several recurrences of the bladder symptoms, necessitating repeated fulguration, which is a typical story of Hunner's ulcer. Between fulgurations, however, she has continued to enjoy reasonable comfort and health.

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[1] Tr. South. Surg. & Gynec. Assoc., 27:247, 1914.